IN THE CLAIMS

1. (previously presented) A method for dew point measurement, comprising:

feeding gas to be studied onto a cooled element with a condensation surface onto which a light flux is incident; and

measuring the due point from a value of reflection of the light flux from the condensation surface,

characterized in that the light flux is polarized in a plane of the incidence, and

an angle of the incidence is selected so that there is no reflection of the light flux in the absence of a condensate from the condensation surface, the condensation surface being made of a dielectric.

2. (original) The method according to claim 1, characterized in that the phase difference between beams reflected from the condensation surface of the cooled element and from the surface of a condensate film is additionally measured, thickness h of the condensate film on the condensation surface of the cooled element is determined, and the concentration of condensed admixtures in a predetermined volume of the studied gas is determined on the basis of the value of the thickness of the film formed during a certain period of time.

3. (currently amended) In a device for dew point measurement, comprising a housing equipped with a sampling tube, the housing containing a cooled element provided with a condensation surface and connected through an optical element to a radiator, the housing further containing a register, cooler and temperature sensor;, the improvements wherein

the cooled element has a condensation surface dielectric plate,

the radiator is a source of light polarized in a plane of incidence on the condensation surface at an angle about equal to the Bruster angle of the condensation surface with ~~condensate thereon~~.

4. (previously presented) The device according to claim 3, characterized in that the angle is within the range of ± 9° of the Bruster angle.

5. (original) The device according to claim 3, characterized in that it is provided with at least one additional register serving for measurement of scattered beams reflected from the surface of the formed condensate.

6. (previously presented) The device according to claim 3, characterized in that the cooler and temperature sensor are mounted on a sampling tube .

7. (previously presented) A method for dew point measurement, comprising feeding gas to be studied onto a cooled element with a condensation surface onto which a light flux is directed and registering the value of the light flux reflected from the condensation surface, advent of the dew point being determined on the basis of the registered value, wherein a light flux polarized in a plane of its incidence is used, and the angle at which it is directed onto the condensation surface of the cooled element is selected so that there is no reflection of the light flux in the absence of a condensate from the condensation surface of the cooled element, which is made of a dielectric, characterized in that the phase difference between beams reflected from the condensation surface of the cooled element and from the

surface of a condensate film is additionally measured, thickness h of the condensate film on the condensation surface of the cooled element is determined, and the concentration of condensed admixtures in a predetermined volume of the studied gas is determined on the basis of the value of the thickness of the film formed during a certain period of time.

8. (previously presented) A device for dew point measurement, comprising a housing equipped with a sampling tube, the housing containing a cooled element provided with a condensation surface and connected through an optical element to a radiator, the housing further containing a register, cooler and temperature sensor, characterized in that the cooled element provided with a condensation surface is made in the form of a dielectric plate, the radiator - in the form of a source of light polarized in the plane of incidence thereof, wherein the optical element is positioned in such a manner that the light flux of the source of polarized light is directed onto the condensation surface of the cooled element, preferably at an angle within the range of ± 9° of the value of the Bruster angle, a register is made capable to measure the phase difference between beams reflected from the condensation surface of the cooled element and from the surface of a condensate film.

9. (previously presented) The device according to claim 8, characterized in that it is provided with at least one additional register serving for measurement of scattered beams reflected from the surface of the formed condensate.

10. (previously presented) The device according to claim 8, characterized in that the housing is equipped with a cooler and a temperature sensor, which are mounted on the sampling tube thereof.